

**ILLINOIS SUSTAINABLE ENERGY PLAN
Comments from Commonwealth Edison Company
March 9, 2005**

INTRODUCTION

Commonwealth Edison Company ("ComEd") is pleased to respond to the questions raised by the Illinois Commerce Commission ("Commission") relative to the Governor's Sustainable Energy Plan ("Plan"). These comments focus primarily on the technical aspects of implementing the Plan. ComEd is generally supportive of the Governor's Plan and looks forward to the challenges of implementing the Plan in a way that is fair to both consumers and industry participants.

As the Commission proceeds with its process addressing the Governor's Plan, it is essential that new RPS standards be integrated with the post-2006 process. The Commission should not consider one initiative without considering its impact on the other.

RENEWABLE PORTFOLIO STANDARD

OVERVIEW

ComEd addresses the specific questions asked by Commissioner Lieberman below. Briefly, ComEd:

- is supportive of the efforts to increase the proportion of renewable resources competitively procured to sell to end use customers in Illinois;
- is concerned that all costs of such resources are identified and reflected in prices to customers;
- recognizes the economic development benefits that renewable resources can bring to Illinois, but also recommends the Commission consider a regional approach to ensuring an effective and efficient marketplace; and
- recommends a thorough review of targets to ensure appropriate levels of achievable renewable resources in the timeframe laid out in the Governor's proposal.

ComEd and Exelon Corporation have long supported the use of wind and other renewable resources as sources for electricity generation. Exelon Generation ("ExGen") is the largest marketer of wind renewable energy certificates east of the Mississippi River, with a wind generation portfolio exceeding 175 megawatts. ExGen is committed to providing clean, environmentally friendly electricity generation to customers located within the PJM Interconnection. So, too, ComEd has pioneered the EcoPower-branded renewable energy certificates and has interconnected both large and small-scale systems to its grid.

Resources under contract include:

- Exelon Generation
 - Waymart Wind Farm – 63MW – installed in 2003 southeast of Scranton, PA;
 - Somerset Wind Farm – 9 MW – installed in 2001 outside of Pittsburgh, PA;
 - Mill Run Wind Farm – 15 MW – installed in 2001 in Fayette, PA;
 - Mountaineer Wind Energy Center – 66 MW – installed in 2002 in West Virginia.
- ComEd
 - Mendota Hills LLC Wind Farm – 50.4 MW – energized January 23, 2004 in Lee County, Illinois (standard avoided cost PURPA rate);
 - Crescent Ridge LLC Wind Farm – 54.45 MW – initial turbines energized beginning February 2005 in Bureau County (long term contract).

In addition, ComEd has 118 MW of landfill gas generation under contract and 0.5 MW of solar. Exelon Generation has 33.5 MW of landfill gas generation under contract from 2 sites. Remarkably, outside of Illinois there are only 170 MW of landfill gas generation in PJM (PA, OH, WVA, NJ, MD and DE). This illustrates the powerful incentive provided heretofore under Illinois' unique Retail Rate Law.

It is our view that all existing renewable projects currently under contract by ComEd should be eligible to meet the RPS targets as set out in the Governor's proposed plan. Those who have pioneered in developing renewable projects should not be at a competitive disadvantage vis-à-vis newcomers.

ComEd and Exelon have participated in a number of forums to explore and ensure that alternative generation resources can be interconnected reliably, safely and cost-effectively to the transmission and distribution systems of utilities and contribute to the fuel diversity and environmental quality of the nation's wholesale marketplace. We are proud to have been pioneers in issuing standardized interconnection requirements for small generators and to have provided supportive comments to FERC on the matter of its recent NOPR on Interconnection for Wind Energy and Other Alternative Technologies. We encourage an on-going dialogue, particularly as wind and other alternative technologies, which today comprise a relatively small share of the wholesale markets, increase in importance and impact.

The current "Request for Public Comment Concerning the Implementation of Governor Blagojevich's Proposal for a Sustainable Energy Plan for Illinois" provides an exceptional opportunity for all Illinois stakeholders to continue this dialogue. It is particularly crucial that this dialogue is being conducted concurrently with the process by which the post-transition competitive procurement plans of ComEd and Ameren are being considered by the Commission. Neither those plans nor the Governor's Plan can be considered in isolation. To do so risks sub-optimizing the outcome of any plan to the potential detriment of Illinois consumers and the competitive marketplace in which suppliers to most Illinois consumers must procure their supply.

Furthermore, the Commission's Post 2006 Initiative also offers important insight to the Sustainable Energy Initiative. The Competitive Issues Working Group reached the following consensus reported in its final Implementation Report:

"Renewable Portfolio Standards

If any Illinois Renewable Portfolio Standards (RPS) measure is adopted it should be competitively neutral and applied equitably to electric utilities (as defined in Section 16-102 of the Act), any Basic Generation Service auction winners or other full requirements electric suppliers serving some or all of a utility's load serving obligation, as appropriate, and ARES (as defined in Section 16-102). An appropriate mechanism for efficient compliance is a system of tradable "green tags" associated with renewable energy facilities that satisfy the RPS requirements. Development and use of an exchange through which such facilities may sell such tags and through which electric utilities, their full requirements electric suppliers, and RES may buy such tags may facilitate use of this mechanism. Subpart E ARES established pursuant to 83 Illinois Administrative Code Part 451, self generators, and cogenerators should not be subject to RPS requirements."

The concept of competitive neutrality is especially important. If it is ignored there may be counter-productive, unintended consequences. If, for example, only utilities (but not RESs) are required to include a renewable supply component, to the extent utility service is priced higher than RES service due to a renewables price premium, then switching away from the utility service towards lower-priced RES service may be encouraged. This could result in less renewable energy purchases in the long run than otherwise anticipated and leave an ever-smaller base of utility customers to shoulder the cost burden.

The Rates Working Group examined similar issues and reported the following in its final report:

"The RWG reached consensus that the question of whether a renewable portfolio standard ("RPS") should be mandated by Illinois after the end of the Mandatory Transition Period is an important issue and that there are considerations that must be reflected in a workable RPS, if one is mandated, including:

- Any RPS must be aligned with the post-2006 procurement process and facilitate the acquisition of cost-effective renewable energy;
- Any RPS must be competitively neutral and consistent with the consensus on RPS issues reached by the Competitive Issues Working Group;
- Any RPS must address cost recovery consistent with the consensus reached in the Rates Working Group;
- Any RPS must consider the effect of the use of renewable resources on rates.

There was disagreement, however, on whether or not an RPS should be mandated by the State of Illinois, and on whether other alternatives for stimulating cost-effective renewable resource development (e.g., green rates) should be adopted. A number of participants supported or accepted an RPS adopted by the State, provided that certain conditions are met. These members expressed the views that Illinois has significant potential renewable electric generation resources, that renewable resources can have environmental advantages and can be inexhaustible, that an appropriate RPS can help stimulate development of such resources, and that renewable resources are complementary to other forms of generation in Illinois. Others, however, held the view that a mandatory RPS is not the proper vehicle to promote appropriate and cost-effective renewable resource development in accord with customer demands, that the claimed benefits of such resources are not a function of a mandatory standard, that many renewable resources are not dispatchable and can have excessive costs, and that an RPS may have an adverse effect on utility costs and resulting rates.

The RWG was, however, able to reach consensus that, if there were an RPS, qualifying renewable resources should specifically include existing and new renewable energy generating facilities (e.g., landfill gas) that meet the definition of renewable energy resources in the Renewable Energy, Energy Efficiency, and Coal Resources Development Law of 1997 (20 ILCS 687/6-3). The RWG also reached consensus that, consistent with the consensus reached by the CIWG, utilities, full requirements suppliers acting on their behalf, and ARES may demonstrate compliance with such an RPS through ownership of renewable energy certificates issued by renewable energy generators that qualify per any Illinois standard.”

ISSUES AND QUESTIONS

Renewable Energy Procurement Standard

(1) What is the most effective way to implement these standards and attain the stated goals? (2) What technical issues should be addressed regarding adding renewable resources, wind resources in particular, to meet these standards within the time frame contemplated in the Plan? (3) How have other states implemented renewable portfolio standards? When describing other states' processes, please include any documentation, citations to web sites, expert contact information, etc., that may be useful in evaluating this information.

Coordinated Plan

The creation of a comprehensive action plan to implement the proposed standards should be a desired outcome of the current inquiry, and to be most effective it must involve all stakeholders in the success of one plan. As noted above, entities including FERC, PJM and MISO can and should be employed by all Illinois stakeholders in order to reach common solutions to questions of interconnection requirements, accommodation of intermittent resources from a reserves and reliability standpoint, and economic equity to

generators, utilities and consumers. A calendar of opportunities will ensure that Illinois can benefit from these other discussions. Furthermore, Illinois should co-ordinate its information with other states that have enacted a renewable or alternative portfolio standard. Complementing a regulatory and fact-gathering action plan, a legislative advocacy plan by the State for continued existence of the Federal Production Tax Credit for Wind will help ensure a more favorable price impact for consumers.

An additional item in the action plan should be the establishment of objective standards for measuring whether a target has been met and the standards for adjusting the targets in the event that meeting the target becomes either uneconomic or technically infeasible.

Technical Issues

Technical considerations arise when considering the planning and real time operation for new intermittent resources. Issues the Commission should consider in order to avoid operational problems in implementing the Governor's Plan are outlined below.

- Summary of Technical Issues

While adhering to the applicable reliability planning standards and criteria, four major areas of consideration are addressed by PJM and the affected Transmission Owners in the System Impact Study for a new generation interconnection (including wind generation). The four major areas of consideration, Thermal, Voltage, Stability and Short Circuit Overduty, may result in the identification of system impacts and network upgrades to facilitate the reliable interconnection of the new generation. Given that any network upgrades would not be required 'but for' the interconnection of the new generation, the developer of the generation is generally obligated to pay for all costs associated with the interconnection. Regarding operations, sufficient standby generation (i.e. spinning reserve) is needed to compensate for the sudden loss of generation from the wind generators due to a wind resource stoppage.

- Thermal Considerations

Analysis of thermal considerations ensures the ability of the attachment facilities and the system to deliver the output of the wind generator. Any thermal violation not addressed could impose an operational limit on the generator's output. In general, the attachment facilities are designed to deliver 100% of the output of the wind generator to the system. Note that PJM studies the system impact of all generators at peak load. Since a wind generator generally produces its peak power at off peak hours of system energy consumption, thermal problems identified in planning studies when the wind generator is at 100% output at 100% system peak load may not have any impact on real time operation and may not need to be remedied. Stated another way, the probability that a wind resource will be producing 100% of its rated output at the time of the system peak is quite low. The developer's decision to spend the additional capital to assure the deliverability of the full output at peak system load is a financial and not a technical decision. In other words, should the developer choose not to

spend the additional capital, the generator could be subject to curtailment in the unlikely event that its output was greater than 20% at high system load constraints. At this time, PJM only studies the wind facility at 20% of its rated capacity to determine applicable network upgrades.

- Voltage Considerations

Provided that practical power factor requirements (i.e. 0.95 lead or 0.90 lag in PJM) have been established, the absence of additional reactive support from wind generators should not be a problem. During normal system operation, wind generators can mitigate some voltage drop problems due to imported power by providing counterflows. Additional capital investment in more advanced design and control schemes could provide some reactive support to the system if needed.

For the simplest induction generator design, a nearby short circuit could speed up the generator, draw significant reactive power from the system and create a low voltage problem. This problem can be solved by tripping the generators, providing additional VAR support, and/or improving the sophistication of the wind generator design. The choice of solution is a function of the financial dynamics of the project.

- Stability Considerations

Most existing wind generators are small induction generators dispersed throughout the system and can be easily restarted. A common approach to avoiding small generator stability problems is to trip these generators from the system and to allow the standby generators (i.e. spinning reserve) to pick up the slack. This approach has also been employed for decades to avoid the instability of small hydro generators.

If the amount of wind generation loss is significant, the possibility exists that there could be an issue if sufficient standby generation is not available to pick up the slack. Maintaining a significant amount of standby generation will add to the costs of supplying energy to the load. To reduce the impact of the generation loss, some wind generators could be equipped with “low voltage ride through” (LVRT) capability to avoid generator tripping. However, these technologies and designs will add to the costs of the wind generator installation. The choice to spend the extra capital to implement these schemes is also a financial decision.

- Short Circuit Considerations

Unlike synchronous generators, induction generators contribute to the short circuit current only during the 1 to 1.5 cycles (.016 to .025 seconds) after the fault occurs. Because of such a short period, the Midwest ISO does not consider the contribution of wind generation to short circuit levels to be a problem and has not examined increases in short circuit levels in past System Impact Studies for new wind resources such as the 160MW Fond du Lac County Wind Generator in Wisconsin.

Even if the fault contribution of the wind generators is incorporated in the system impact study, most over duty issues can technically be rectified by replacing or upgrading existing circuit breakers.

- Spinning Reserves

Spinning reserve represents the reserve capability provided by backup generators that have been synchronized to the Transmission System. As the wind and wind generator outputs cease, it is important that sufficient spinning reserve is available on line to offset the drop of wind energy. Common practice sets the spinning reserve equal to the largest unit (i.e. 1,200 MW) on the system such that a loss of the largest unit would be picked up and the system's frequency would not be affected.

- Seasonal and Daily Variations in Wind Resource Availability

Studies of seasonal variation of wind resources in the Midwest and New York generally support that wind energy peaks in the spring and fall with the summer months experiencing less output. There appear to be limitations to wind output in the summer months during periods of peak system electrical usage. Daily variations generally have shown that the highest output occurs in the morning and in the late afternoon through the evening.

Wind developers are usually very accurate in predicting the annual energy production at a specific wind farm site. However, given the intermittent nature of wind, developers are unable to accurately predict future generation output levels at any given time of year such as during summer peak load conditions.

While it is sometimes argued that a key economic benefit of wind is that it displaces high cost gas-fueled generation, it must be recognized that gas is the marginal fuel in the ComEd load zone much less frequently than in other regions of the country, including PJM Classic. Furthermore, the ComEd load zone possesses some unique attributes. On-line wind generation may back down the base load nuclear units during low load conditions and operational protocols may be necessary during such conditions to protect system reliability.

FERC has recently opened a rulemaking to consider technical requirements for Interconnection for Wind Energy and Other Alternative Technologies, Docket No. RM05-4-000 (see <http://www.ferc.gov/industries/electric/indus-act/gi/wind.asp>). In particular, this rulemaking is considering the addition of Low Voltage Ride-Through Standards, Supervisory Control and Data acquisition (SCADA) Capability and Power Factor Design Criteria (Reactive Power). Comments are currently being solicited and will provide additional insight to the Commission's technical considerations herein.

None of these technical issues is insurmountable. In fact, creative solutions are being driven by increased interest in wind. For example, it has been reported that Hawaiian Electric and the S&C Electric Company are pioneering a wind farm "shock absorber" to

help stabilize smaller or less interconnected systems in the face of wind generator fluctuating output. However, the costs caused by these issues must be considered when assessing the economics of an aggressive renewable energy target that relies heavily on intermittent resources such as wind. Many of these costs are monetized through charges from PJM to suppliers and will ultimately affect prices passed on to consumers.

ComEd recommends that the Illinois stakeholder group examine all the costs and attempt to quantify and reach consensus on the potential near term and long term rate impacts of renewable resources.

Other State Initiatives

Pennsylvania has recently enacted an Alternative Energy Portfolio Requirement for its electricity suppliers. While this legislation differs somewhat, due to Pennsylvania's inclusion of a wider array of resources and the ability to procure those resources from all of PJM, it is also in the early stages of a stakeholder process designed to create the rules under which it will be implemented. Utilities are required to comply after their transition periods end, for PECO this is after 2010, but voluntary compliance during a utility's transition period can be "banked" for application once the transition period ends. Pennsylvania, like Illinois, is just developing its post-transition rules.

New Jersey and Maryland have also adopted Renewable Portfolio Standards as well as competitive procurement processes in which wholesale suppliers bid to supply a portion of the utility's load serving requirements. In both those states, the winning bidders are responsible for supplying the appropriate amount of renewable resources as part of their winning supply bids. Hence, there is no separate contracting by the utility for solely "green" products. Connecticut, Massachusetts and the District of Columbia also provide that competitively chosen suppliers may incorporate the "green" component into their supply to the utility.

Other states, such as California, Nevada, New Mexico, Washington and Colorado, require that the utility directly procure the resources.

New York has taken yet a third approach. In New York, the New York Public Service Commission has directed the New York State Energy and Research Development Authority (NYSERDA) to issue an RFP for procuring renewable energy from all eligible renewable resources to meet the New York RPS. Renewable energy procurement costs will be funded through a charge on the delivery portion of Investor Owned Utility customers' electric bills. Funds collected by the IOUs will be transferred to NYSERDA. Details are in the "Order Authorizing Fast Track Certification and Procurement" Case 03-E0188, and September 22, 2004, press release on www.dps.state.ny.us.

Eligible Renewable Energy Resources

The renewable resource types identified in the Renewable Energy, Energy Efficiency, and Coal Development Law of 1997, include "wind, solar thermal energy, photovoltaic cells and panels, dedicated crops grown for energy production and organic waste

biomass, hydropower that does not involve new construction or significant expansion of hydropower dams, and other such alternative sources of environmentally preferable energy." For each of the above resource types, as well as for methane recovered from landfills, what is the current capacity and output of such resources? For each resource type, what are the currently planned expansions of such resources? For each resource type, what is the technical potential for increasing the development of such resources in Illinois? How do these levels compare to the various standards identified in the Governor's Renewable Energy Procurement Requirement, cited above?

Existing Renewable Resources

Supplementing the information provided in the Overview, above, approximately 1,488 MW of wind generation are in the PJM transmission interconnection queue in Illinois (essentially the ComEd zone). Current experience suggests 1 in 4 projects proposed will be constructed and that it takes as long as 3 to 5 years from the development stage through to the implementation stage.

Approximately 209 MW of landfill gas to energy (LGTE) is in operation in Illinois. About 118 MW of that is in ComEd's service territory. Roughly 207 MW of new LGTE could be developed in Illinois. Due to the Retail Rate Law, the most economical sites have already been developed in Illinois. The higher cost of new LGTE will probably approach the costs of new wind. By about 2010, the State would use up the existing and new LGTE available. LGTE credits from outside Illinois would be required or wind would be required to make up the gap in meeting the RPS.

These numbers indicate that to meet the Governor's goals, additional wind site development would need to be commenced soon. The 2% -3% goals in the near term, even if only 75% was wind, could require 500-800 MW of wind in the ComEd portfolio alone. The Commission should review feasibility and consider recognizing the contribution of LGTE in the near term. Once LGTE resources are fully utilized, a greater proportion of new resources can be wind.

Potential Renewable Resources

If one looks at technical potential, the American Wind Energy Association has estimated 6,980MW of average power output potential for wind in Illinois. The United States Department of Energy (USDOE) Office of Energy Efficiency and Renewable Energy has evaluated the wind production potential in Illinois. An early study, still posted on their web site, is based on assumptions that only areas with Class 4 or greater wind speeds should be considered for development and land that is not compatible with wind generation should be excluded from consideration. After excluding 50% of forestland, 30% of farmland and 10% of rangeland, this study has estimated that approximately 0.1% of the land area of the state of Illinois possesses the potential to supply wind energy, with the ability to supply 1% of the state's energy consumption.¹

¹ www.eere.energy.gov/state_energy/tech_wind.cfm?state=IL

A more recent study² suggests that the potential exists for 3,000 installed MW at Class 4 sites, and an additional 6,000 MW potential at Class 3+ sites, covering 1,800 square kilometers or 1.2% of the Illinois land area.

Even though USDOE eliminated from its study all urban and environmentally sensitive lands (state parks, wildlife refuges, etc.) all of the technically available resources may not be fully utilized for various reasons.

The proximity of wind resources to transmission or distribution facilities is a significant issue. Wind resources are typically located in remote areas where the native electrical load is minimal and the existing transmission and distribution facilities are designed to accommodate the native load but not necessarily the addition of significant native generation. The result is that wind generators may be responsible for network upgrades to provide the network capacity and protection to reliably inject the generation into the transmission and distribution systems.

Finally, one must also factor in the manufacturing queue. ComEd understands that all manufacturing capability for wind generator hardware is fully committed for 2005 and 2006 production capability is quickly filling.

ComEd and Exelon recommend that the Commission invite the U.S. Department of Energy, which funds the National Renewable Energy Laboratory, to appear at an Illinois technical conference to explore fully the potential for wind within Illinois.

Economic development benefits of new generation resources, particularly the benefits that wind may bring to the rural Illinois economy, are important to the State. Nonetheless, we recommend that a regional approach be explored in workshops. Markets are regional and air quality effects are regional, and these suggest discussion of a regional approach.

In addition, the Commission should examine as broad a portfolio of renewable resources as possible. For example, while existing hydro generation in the state is on the order of 40 MW, data suggests additional development capability on the order of 300 MW or more. Not only will a broad view of qualifying resources hold a potential for enhancing portfolio diversity, it will also provide an opportunity for customer-based resources to assist in meeting the State's goals. For example, geothermal heating and cooling systems may hold promise, particularly where land is available, to assist in displacing traditional heating and cooling fuels with sustainable resources.

Competitive Procurement

How should the Commission implement this policy? Please include in your analysis how Illinois utilities and ARES should go about entering into "competitive long-term (e.g. at least ten-year) power purchase agreements" with renewable energy generators. How have other States addressed similar issues regarding the procurement of renewable resources? When describing other states' processes, please include any

² http://www.eere.energy.gov/windandhydro/windpoweringamerica/where_is_wind_illinois.asp

documentation, citations to web sites, expert contact information, etc., that may be useful in evaluating this information.

The Plan states “Power purchase agreements for renewable electricity procurement should be based on reasonable costs that reflect a full accounting of overall longterm benefits of renewable energy (i.e., consumer benefits of long-term fixed price contracts, environmental, economic and electric system benefits including increased fuel diversity). Recovery for renewable energy procurement will be treated as other fuels as allowed by law and consistent with this standard.” How should the Commission implement this policy? Please provide information relating to how such benefits should be accounted for, including how other states have addressed similar issues. When describing other states’ processes, please include any documentation, citations to web sites, expert contact information, etc., that may be useful in evaluating this information.

How should the “overall long-term benefits of renewable energy (i.e., consumer benefits of long-term fixed price contracts, environmental, economic and electric system benefits including increased fuel diversity)” be measured? How have other states assessed such benefits? When describing other states’ processes, please include any documentation, citations to web sites, expert contact information, etc., that may be useful in evaluating this information.

ComEd and Exelon recommend exploring clarification of the Governor’s goal of 2% by 2006. Specifically, requiring that contracts be in place by the end of 2006 to begin delivering energy in sufficient quantity by January 1, 2007, concurrent with the commencement of flow of Post Transition Period competitive supply, would be optimal. This interpretation will achieve the goal of getting “iron in the ground” by the end of 2006 while not also imposing unrecoverable costs on utilities. Furthermore, this will allow auction winners, should that competitive procurement process be approved, to secure similar contracts. It will also allow the development of rules so that utilities and their suppliers alike will understand how the procurement of renewable resources will interplay with the procurement of the other competitively procured products in an operational and contractual sense. We recommend that the Commission convene a technical workshop to examine, in detail, how renewables procurement will affect the quantities purchased and the tariff translation for the competitively procured post-transition supply.

ComEd believes that handling renewable procurement through the auction process or through a separate utility procurement of “green” resources under 10 year contracts can be accommodated, perhaps through a separate Request for Proposal process, but the rules must be very clear for the benefit of all the suppliers.

We note that the renewables procurement process design decision need not wait for the conclusion of the post-transition procurement proceeding. In fact, renewables procurement rules, if expeditiously developed and agreed-upon, can then be

accommodated in whatever procurement process is eventually approved for Post 2006 competitively procured supply.

Further, to ensure that uneconomic projects are not being built or in the event that the market does not develop as planned, we recommend the inclusion of a “force majeure” clause in the Plan. The recent Pennsylvania Alternative Energy Portfolio Standard legislation incorporates the force majeure concept.

Interstate Renewable Energy Trading

What issues should this study examine? Are there other interstate trading programs in effect? If so, how do they work? When describing other states’ processes, please include any documentation, citations to web sites, expert contact information, etc., that may be useful in evaluating this information.

As noted in the Overview, both ComEd and Exelon Generation trade in renewable energy certificates. Many, if not most, of these trades cross state lines. There is an active bilateral market. Recognizing the need for a common data base to track, verify and account for these certificates and transactions involving renewable certificates, PJM has begun an examination of how its Generator Attribute Tracking System (GATS) can usefully keep track of renewable energy certificates: recording the source, verifying that it is renewable, recording the sink, verifying that a certificate is counted against load only once, etc. ComEd recommends that the Commission actively monitor these efforts. We believe that, even if states have differing definitions of qualifying resources, the GATS data system could ensure that each state’s stakeholders get the resources they desire.

Earlier in its response, ComEd recommended that the Commission invite the U.S. D.O.E. to conduct a technical workshop to assist with assessing the amount of wind feasible in Illinois. It would be helpful to ask the same entity to also assist with assessing the multi-state potential for renewable resource trading, including renewable energy certificates. It may also be of value to convene a workshop of the Public Utility Commissions within PJM, notably those from New Jersey, Maryland and Pennsylvania, to share views on the emerging renewable market, including the tracking of renewable energy certificates.

Since many renewable resources are intermittent and non-dispatchable, renewable energy certificates have developed as a way to separate the green attributes of the generation from the power and energy commodity attributes. Hence, the generation can be accepted to serve the electric load as available, whereas the green attributes can be applied as needed to meet the state’s mandates on the load server. There appears to be reluctance among some stakeholders to accept certificates as legitimate measures of meeting a renewable portfolio standard, but as a practical matter they may be the best way to match the supply and the demand. Since many renewable generators are considered Qualifying Facilities under PURPA, and enjoy particular benefits through a requirement that the host utility accept their generation, a green or renewable certificate can allow for separate yet highly efficient transactions for the energy and green attributes and allow a host utility to sell those attributes in excess of those it needs to meet its own renewable portfolio requirement. Carrying this thought further, it becomes readily apparent that a regional,

transparent approach to certificates brings the same benefits to consumers that a regional approach to energy markets brings – many buyers and many sellers bringing efficient competitive outcomes.

Penalties for Noncompliance

What information should be required to demonstrate compliance with the provisions on the Plan?

If the Commission approves a competitive procurement process for renewable resources, it should be readily apparent through its oversight of that process whether sufficient participants “come to the table” to meet the Plan’s requirements. If the process was deemed fair, yet insufficient resources are offered, then no penalty should be assessed.

A fair way of measuring achievement of targets after the fact, assuming sufficient resources are contracted via an approved competitive process, will be to determine the MWH of green resources applied against the load server’s energy supplied over a given time period as a percentage of the total MWH sold at retail for that period. ComEd recommends that the annual period being examined be the PJM Planning Year (June-May) to coincide with electricity market operations.

We also recommend the “banking” to reflect the reality of contracting of renewable projects. Contracting for renewables is not going to match precisely the targets set out in the Governor’s proposal. Any excess certificates should be able to be banked for application against future period requirements. In addition, a utility should be able to make up any shortfall within a given period through purchasing additional renewable energy certificates generated over the same period or banked from previous periods, and to bank any excess for application against future period requirements.

Additional References - Renewables

- The Effects of Integrating Wind Power on Transmission System Planning, Reliability, and Operations, GE Power System Energy Consulting, January 8, 2004.
- Characterizing the Impacts of Significant Wind Generation Facilities on Bulk Power System Operations Planning, Electrotek for the Utility Wind Interest Group, May 2003.
- System Impact Study Report – 160MW Wind Generation in Fond Du Lac County, Wisconsin, MISO #G335, American Transmission Company, November 7, 2003.
- National Wind Power Study Australian Greenhouse Office, Australian Government, November 2003.
- PJM Website at www.pjm.com.
- AWEA Website at www.awea.org.
- USDOE Office of Energy Efficiency and Renewable Energy at www.eere.energy.gov.
- Pennsylvania Public Utility Commission website at www.puc.paonline.com.

ENERGY EFFICIENCY PORTFOLIO STANDARD (“EEPS”)

OVERVIEW

ComEd is supportive of an EEPS that takes a long-term view, is based upon clear, measurable and reasonable targets, and where the utility has the key managerial role.

ComEd acknowledges that a carefully designed portfolio approach will be necessary to ensure success of this initiative. Our initial thinking is that:

- A broad menu of demand response and energy efficiency programs that covers all customer classes is appropriate;
- Performance should be primarily focused on the overall portfolio rather than its individual program components as has been demonstrated in other state programs;
- Measurement and verification of portfolio results should be independent and focused on making future programs better as opposed to hindsight review for purposes of cost disallowance; and
- Interested stakeholders should be consulted for their ideas and views on the most effective programs, delivery methods, and measurement methods.

ComEd is ready to work with all parties on an EEPS that ensures cost recovery, includes pre-approval so there are no hindsight prudence reviews, and allows “regulatory out” clauses in any contracts, so that arrangements can be unwound in the event of adverse regulatory treatment.

Considerable preparations will be required in 2006, not only to establish the regulatory processes for the Commission, but also to design programs, adequately consult with stakeholders, issue requests for proposals (RFP), and begin negotiating and executing contracts. It is our view that Illinois should adequately design the process, including the checks and balances to ensure that the EEPS is successful. We believe that the implementation date of the EEPS should be discussed in order to assure adequate cost recovery for utilities.

ISSUES AND QUESTIONS

Please indicate the most effective way to implement these standards and attain the stated goals. What technical issues should be addressed regarding the implementation of these standards within the time frame contemplated in the Plan? Please indicate how other states have implemented similar standards. When describing other states’ processes, please include any documentation, citations to web sites, expert contact information, etc. that may be useful in evaluating this information.

Targets and Metrics

ComEd supports the Governor’s proposed approach establishing targets that increase

over time and that focus on addressing load growth. ComEd also supports the Governor's proposal that programs should be competitively procured, unless otherwise approved, as this will drive cost effective programs first, but also allow for the inclusion of programs that might fulfill other important state policy considerations, such as for low income customers.

The annual EEPS targets should be stated using a common term. ComEd recommends using energy-based, or MWH-based, units of measure. Thus, EEPS goals should be specifically stated in terms of a percentage of energy (MWH) growth and can be readily converted to MWH targets. Research shows that energy efficiency results are reported on a MWH basis in other states. The MWH basis also permits simple conversion to, and enables estimates of, environmental benefits, such as carbon dioxide emissions offsets.

ComEd supports the Governor's exclusion of a penalty provision for the EEPS. Further, we recommend that a force majeure provision be integrated into the EEPS to ensure that uneconomic expenditures are not pursued simply to achieve EEPS targets, or if utilities cannot find contractors to deliver programs subject to the EEPS and related provisions.

The combination of a portfolio approach and using MWH-based units of measure requires a workable means of bringing demand response programs and other important public policy considerations (e.g. low income programs, energy efficiency education) into the portfolio. We recommend that the Commission investigate the use of "translation factors" to enable the conversion of MW-based program impacts (as is the case for demand response) or other important policy-based programs (e.g. low income, education) into MWH-based EEPS terms.

The treatment of existing demand response programs/impacts in the pre-EEPS baseline needs to be carefully addressed, given the legacy and magnitude of current demand response programs and the evolution of demand response at PJM and MISO. Such programs are evolving constantly, especially due the emergence of RTOs and the evolving nature of demand response within PJM.

It is our view that existing demand response programs should count toward achieving EEPS targets. Demand response typically requires annual renewal---the demand response resource must be rebuilt every year. Thus, historical demand response levels cannot necessarily be taken for granted in subsequent years. Furthermore, ComEd should not be penalized for its early action to build its ambitious and successful demand response portfolio.

Utility-based Programs

With cost recovery adequately addressed, ComEd agrees with the Governor's reliance upon the utilities in the key managerial role in attaining the EEPS goals. Research shows that many states including Massachusetts, New Jersey, Connecticut and California have successfully utilized the utility-based model. Utilities have technical expertise, business processes and customer relationships in place to enable fast ramping up of programs.

ComEd anticipates it can draw upon its experience in designing and operating one of the nation's largest demand response portfolios to create the post-2006 portfolio of demand response and energy efficiency programs to achieve the targets set forth in the EEPS.

Alternative models in other states such as Oregon and Vermont that exclude utilities from the process will not fit well with the proposed timing of the EEPS or with the situation and opportunities in Illinois. For example:

- In Oregon, it took three years from the time the enacting legislation was passed until Efficiency Oregon opened its office;
- Unlike Illinois, Vermont is very small (state energy efficiency budget of \$13 million) and had a legacy of over 20 different utilities offering programs. Vermont chose the state-managed model to bring more consistency in programs across their state. Illinois has fewer utilities serving much larger and diverse populations than Vermont;
- Each utility should be permitted the flexibility to offer programs that make sense for their unique customer make-up. A program designed for Chicago may not make sense down state; thus each utility should be permitted the flexibility to offer programs that are appropriate for their unique customer make-up.

How should the Commission implement this policy? How should these benefits be accounted for, including how other states have addressed similar issues? When describing other states' processes, please include any documentation, citations to web sites, expert contact information, etc. that may be useful in evaluating this information. How should the Commission measure the success of these programs?

In our view, the Commission can most effectively implement the EEPS by identifying acceptable competitive procurement processes that enable a portfolio of demand response and energy efficiency programs for all customer classes. This does not necessarily imply that all programs will apply to all customer classes or that utilities will implement programs themselves. Research from states with large-scale energy efficiency initiatives, including Connecticut, Massachusetts, New Jersey, shows that third party vendors provide the implementation function. ComEd contemplates the extensive use of experienced third party program administrators.

It is our view that the role of the utility is to manage the portfolio and related contracts to deliver the MWH savings. The Commission should focus on developing a process that ensures energy efficiency is procured in a manner consistent with the EEPS. The Commission should establish the following:

- allocation of programming among the customer classes, including special policy considerations, such as low income;
- the formulaic relationships (i.e. "translation factors") to convert all programs into MWH-based terms;
- measurement and verification process;
- requirements and process for reporting portfolio energy savings; and
- cost recovery for utilities.

Measurement and Verification

Our view is that all programs should be subject to independent measurement and verification of results. Measurement and verification potentially take much more time and funding than may be anticipated; however, they are critical for the success of the EEPS and should be integrated into the overall funding and schedule. It should be clear up front as to what basis compliance with the EEPS will be determined, i.e. gross energy reductions or net energy reductions, and what the standards are for determining those savings (e.g. standard industry practices, the International Performance Measurement and Verification Protocol, Inc. (IPMVP; ref. www.ipmvp.org).

We believe it is important that measurement and verification should be future-oriented, i.e. it should be used for purposes of improving performance of programs in the future, as opposed to being used for hindsight prudence disallowance of costs.

Illinois Sustainable Energy Advisory Council (ISEAC)

We recommend that the ISEAC should have a charter that describes its scope of purpose, organizational structure and performance metrics. The charter should be established through consensus of interested, participating parties.

Funding and Cost Recovery

The assurance and timeliness of cost recovery for utilities is a vital component of large-scale efficiency initiatives. Research shows that the cost recovery issue has been addressed in all states where energy efficiency is a key component of energy policy. The cost recovery should minimize risk of disallowance from hindsight reviews. The “rate design” of cost recovery should carefully balance the costs and benefits of energy efficiency and consider compliance with established law, impacts on rates, impacts on customer classes and other traditional ratemaking principles.

Additional References – Energy Efficiency

- Connecticut – www.state.ct.us/dpuc/ecmb
- Massachusetts – www.mass.gov/doer.
- New Jersey – www.njcleanenergy.com
- Oregon – www.energytrust.org.
- Vermont – www.encyvermont.org.

CONCLUSION

ComEd looks forward to being an active participant and supporter of the Governor’s Plan, and looks forward to working with all stakeholders.

With respect to utilities, the Commission can clearly facilitate such voluntary participation by clearly providing for a legally-sustainable method for utilities to recover the costs of implementing the Plan and by specifying up-front the conditions under which the Commission would permit the recovery of Plan costs in the utility's rates. If, for example, Commission review of individual contracts were to be required before costs could be recovered, then utilities would likely feel compelled to include an "escape clause" in those contracts that can be exercised if cost recovery is not permitted.

Similarly, the risk of after-the-fact prudence reviews will tend to discourage utilities from entering into long-term contracts with renewable energy suppliers and energy efficiency contractors. The nature of the market virtually guarantees that market prices will periodically be below long-term contract prices. Subjecting utility decisions to perpetual second-guessing dramatically increases the financial risk of their voluntary participation in the first instance. ComEd is not suggesting that utility decisions must be shielded from any scrutiny, rather the evaluation of those decisions should be done only once and up-front, so that any necessary adjustments can be made.

In addition, refusal of any industry members to participate voluntarily in the Governor's Plan would also increase the risk to members that might otherwise choose to participate. No company wants to face the criticism and business consequences of burdening its customers with costs that competitive providers eschew.

For these reasons, the success of the Governor's Plan will largely depend on the willingness of market participants to voluntarily cooperate to ensure that the Governor's Plan is implemented in a way that is fair to consumers and all industry participants.